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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,888	06/07/2002	Markus Leuz	10191/2045	6086

26646 7590 06/02/2004

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EXAMINER

TRAN, DIEM T

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,888

Applicant(s)

LEUZ ET AL.

Examiner

Diem Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 9,11-15,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 9,11-15,18,19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This office action is in response to a Request for Continued Examination (RCE) and an amendment filed on 4/26/04. In the amendment, claims 1-8, 10, 16, 17 have been canceled, claims 18-19 have been added and claims 9, 11-15 have been amended. Overall, claims 9, 11-15, 18, 19 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9, 11-15, 18, 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 18, 19 of the amendment filed on 4/26/04 the applicants added the claimed limitation ***“determining a particulate emission rate of the internal combustion engine based on at least: a) one first operating parameter of the internal combustion engine; and b) an oxygen concentration in exhaust gas of the internal combustion engine; and integrating the particulate emission rate over time, resulting in a loading state of the particle filter”***, and in claim 11 of the amendment filed on 4/26/04 the applicants added the claimed limitation ***“the step of***

determining the oxygen concentration in the exhaust gas based on one of a rotational speed and a signal characterizing an injected fuel volume, are considered new matter since the originally filed disclosure does not contain any support for the invention as now claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9, 11-13, 18, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinzawa et al. (US Patent 5,195,316).

Regarding claims 18, 19, Shinzawa discloses a method for controlling an internal combustion engine having an exhaust treatment system that includes a particle filter, comprising:

calculating a loading state of the filter, the process of calculating including:

determining a particulate emission rate of the internal combustion engine based on at least one first operating parameter of the internal combustion engine and an oxygen concentration in exhaust gas of the internal combustion engine (see col. 4, lines 49-52); and integrating the particulate emission rate over time, resulting in a loading state of the particle filter (see col. 5, lines 42-49).

Regarding claims 9, 11, Shinzawa further discloses that the operating parameter includes a rotational speed (see col. 4, lines 49-53).

Regarding claim 12, Shinzawa further discloses that the step of determining the particulate emission rate includes considering an additional variable representing a temperature in the exhaust treatment system (see col. 4, lines 49-62).

Regarding claim 13, Shinzawa further discloses the step of controlling the exhaust treatment system during a normal operation in accordance with the quantity (see col. 5, lines 45-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinzawa et al. (US Patent 5,195,316) in view of Hasegawa et al. (US Patent 4,574,589).

Regarding claims 14, 15, Shinzawa discloses all the claimed limitations as discussed in claim 18, however, fails to disclose the step of detecting an error in accordance with the quantity. Hasegawa teaches that it is conventional in the art, to measure a loading of the filter using pressure sensors and compare the loading with a

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predicted loading based on engine operating conditions (engine speed and load) to determine an error in the measured loading (see col. 5, lines 1+).

It would have been obvious to one having ordinary skill in the art, to have utilized the teaching of Hasegawa in the Shinzawa device, since the use thereof would have improved the operational efficiency for the particulate filter by determining and correcting a loading value of the filter.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:00 a.m.- 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

DT
May 25, 2004



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700